or two species of Physalia are, however, more common on the United States coasts than in the Mediterranean. The only member of the long-stemmed Siphonophoræ provided with a float or air-bladder found heretofore on the New England waters is *Agalmopsis cara*. Mr. Fewkes can now add *A. elegans*, and he thinks that extended observation in the southern bays of the country will bring to light some of the well known forms common to all oceans, such as Apolemia, Abyla, Physophora, and Gleba. Some of these have already been taken in the Gulf of Mexico and the Caribbean Sea. Rhizophysa, found in the same localities, might also be expected to be brought to the Eastern American coasts by oceanic currents.

PARASITE ON THE AMERICAN BLUE PIKE.—In the *American Journal of Microscopy* for March, Prof. D. S. Kellicott describes a new species of Argulus found on the blue pike (*Stizostethium salmoneum*, Jord.). The fishermen of the Niagara River at Buffalo say that when the water becomes warm the fish gets too lazy to take food, that it then loses flesh, and through its inertness becomes infested with these lice. Having given this subject especial attention, Prof. Kellicott is inclined to think the account of the fishermen is correct. The parasite occurs usually on the top of the head of the fish. When there are several they are, as a rule, huddled together often in heaps, so that the knife may remove a number at once; it occurs also on the fins. None were found in the mouth cavity. As many as twenty were taken from one lean fish. When living specimens of the Argulus were placed in a tank with a small specimen of *Lepidosteus osseus* and some minnows, they shortly fixed on them, and the minnows soon died, apparently killed by the parasites. When first put in, the fish would pursue and catch them, but would eject them with a suddenness and a queer expression that was most amusing. In a few moments they were left unnoticed by the minnows. The gar recoiled in evident fear when one would be seen approaching. A large female once fastened on to the end of the long nose of the gar, where it clung for several days, despite the vigorous efforts of the fish to dislodge it. Cold weather seemed to destroy them: the fishermen assert that after frosts the blue pike become fat, and then no lice are found on them. The species is called *A. stizostethii*. The author believes—against the assertion of Leydig—that the abdominal lobes have a function of respiration above all other parts of the body, and he describes with a good deal of detail the appendages to the several legs.

MOTION IN ALGÆ.—From some interesting observations recently made by Herr Stahl, as to the influence of light on the motions of algæ (*Verhandl. der phys.-medic. Gesellsch. in Würzburg*, Bd. xiv.) it appears that light has a directive influence on *Closterium moniliferum*, the cell of which tends to place its longitudinal axis in the direction of the light rays, and a certain opposition appears in the two halves of the cell, such that one half is attracted to the light and the other half repelled. Further observation showed that the closteria underwent periodic changes, in virtue of which the two halves alternately at successive intervals turned towards the light. These experiments were made with diffuse daylight of little intensity. When the intensity of the light was increased, the orientation of the closteria was changed; the position parallel to the light rays was given up, and the cells placed themselves at right angles to the incident light. This cross position could be again exchanged for the parallel one by deadening the light. Whether temperature has much to do with these positions of closteria has not yet been determined; the temperature of the minimum seems to be not without action on the period between two reversals. The foregoing experiments should be made with quite healthy vigorous closteria. Some other phenomena of orientation were observed by Herr Stahl in *Micrasterias rotata* and in a species of *Mesocarpus*.

GEOGRAPHICAL NOTES

THE fiftieth anniversary meeting of the Geographical Society was held on Monday afternoon, the Earl of Northbrook presiding. Apart from the flourishing condition of the Society, both numerically and financially, the most interesting feature in the Council's Report was the part relating to the annual grant for scientific purposes. During the past year a plan was put into operation for giving practical instruction to intending travellers in the use of instruments for astronomical observations to fix positions, in surveying, and in the measurement of heights by barometric and hypsometrical methods. This attempt to improve the scientific training of our travellers has already met with considerable success, and several of the pupils who have received instruction have left for China, Afghanistan, Central Africa, Central Asia, &c. In order to facilitate the instruction in astronomical work, an observatory has been built on the roof of the Society's house. The medals and other awards were afterwards distributed by the President, Count Piper, the Swedish Minister, receiving for Prof. Nordenskjöld a copy of a special vote of thanks and his diploma as Honorary Corresponding Member, as well as the royal medal for Lieut. Palander. Mr. W. Giles received the other royal medal for his cousin, Mr. Ernest Giles, and Mr. R. N. Cust the gold watch awarded to Bishop Crowther for his services on the Niger. A copy of a resolution of the Council, eulogistic of his "History of Ancient Geography," was also read and handed to Mr. E. H. Bunbury. The gold and silver medals having been given to the successful candidates in the recent public schools prize examination, the ballot was taken for the new council, resulting in the election of Lord Aberdare as President, and Mr. John Ball, F.R.S., Sir Fowell Buxton, Mr. J. K. Laughton, Sir George Nares, Lord Reay, and Sir Richard Temple, in the place of the retiring members of council. In the course of his annual address Lord Northbrook summed up the results of recent explorations in the Arctic regions, in Asia, and in Africa, as well as of Admiralty surveys in various parts of the world.

HERR VON BOGUSLAWSKI publishes, in the *Annalen der Hydrographie*, the conclusions to which he has been led by recent observations on ocean temperatures:—1. The waters of the North Pacific are in general colder than those of the North Atlantic. 2. The waters of the South Pacific are warmer than those of the South Atlantic, to a depth of 1,300 metres; beyond that they are colder. 3. The bottom temperatures are generally lower in the Pacific than in the Atlantic at an equal depth and in the same degree of latitude; but we do not find any part of the temperature in the former as low as those of the Antarctic part of the South Atlantic between 36° and 38° S. lat. and 48° and 30° W. long., where in seven places temperatures of $-0°{\cdot}3$ to $-0°{\cdot}6$ were found. 4. In the west part of the Pacific and in the neighbourhood of the Indian Archipelago, the temperature of the water reaches its minimum at depths which vary from 550 to 2,750 metres, and remains the same from that depth downwards. In all the Atlantic the temperature from 2,750 metres lowers slowly but regularly.

THE Council of the German African Society has now arranged with the King of Belgium, as president of the International African Association, that, instead of carrying out their former intention of establishing a German station on the southern bank of Lake Tanganyika, their expedition, which is now at Zanzibar, preparing for their tour into the interior, shall first establish a station at Mangasa; that, however, the right to found a second station near Lake Tanganyika shall be reserved to them. Dr. Pogge of Mecklenburg, already well known through his African travels, will become the director of this second station, which will now perhaps be established at Mussumba, the capital of Muata Tamwo. This station will form a link in a complete chain of small settlements which are to extend all over the Dark Continent.

A LETTER in the *Deutsche Zeitung* announces that, after five months of unremitting toil, the Austrian African traveller Marno has been able to break through the obstacles on the White Nile caused by the unchecked growth of twenty months, and has re-opened the navigation for trade and passenger traffic. Accompanied by the photographer Buchta, also an Austrian subject, Marno had made a trial trip on a small steamer belonging to the Egyptian Government, penetrating as far as Ladova, and returning safely.

A LIST of 25,000 geographical terms in most frequent use has been drawn up in Chinese by Li Fêngpao, Chinese Minister at Berlin, with the assistance of Dr. Kreyer and Dr. Allen. This list is the basis upon which a large atlas of the world on Mercator's projection has been prepared and photolithographed at Berlin. It also represents the nomenclature employed by Dr. Kreyer in a translation of Daniel's Geography, a large standard work in sixteen Chinese volumes.

WE regret to learn that Père Horner, who has been a true friend to many an African explorer, died at Bordeaux on May 20. He had but recently returned from Zanzibar, where he had resided for many years, and had taken an active interest in all attempts to put down the slave-trade in Eastern Africa, and in

this connection we believe that he rendered valuable service to Sir Bartle Frere during his mission to Zanzibar.

THE *New York Herald* of May 14 says:—The evidences multiply which go to show that there has been an early and exceptionally large break-up of the ice-fields within the Arctic basin since the sun crossed the Equator. The extraordinary mildness of the last winter was universally marked east of the Rocky Mountains, and it would seem the abnormally high temperature extended far to the north and made its impression on the icy seas. Off the coast of Newfoundland the recently reported ice drift will be memorable not only for the magnitude, but also for the multitude of the icebergs and the ice-fields. On the western side of the continent the winter reports indicated a milder season in the vicinity of Behring Sea and its Polar approaches. It is not improbable, therefore, that the steamer *Corwin*, about to sail for the relief of the missing whalers and to communicate with the American Arctic expedition in the *Jeannette*, will find that the premature development of the spring has already loosened their icy bonds, and that they are preparing to pursue their respective routes. The sun's power may be insufficient to dissolve the *Jeannette's* solid moorings, but the mightier agency of winds and waves attending the storms that sweep the ocean north of Behring Strait in May and early June may be expected to break up the ice off Wrangell Island and accomplish her release sooner than if she had wintered on the north-east side of Arctic America.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

CAMBRIDGE.—Prof. Humphry's Rede Lecture on man was interesting and eloquent, if on the whole rather depressing. He pleaded for long and patient investigation, especially in coming to the discovery or comprehension of any process, whether of natural selection or any other, by which the large cranial cavity of man can have been evolved in early men. He gave full weight to the argument from the size of the brain at birth, and the perfection of the lungs at the same period. At any rate the brain of primitive man appeared to have been structurally fitted for higher duties than they were ever called upon to perform. His brain was prophetic of his future. Ability is to be measured by the power to deal with the material before us; and thus it is doubtful whether the ability of the present was greater than that of preceding generations, prehistoric or historic. Progress did not necessarily imply improvement, and increased means did not imply greater power, however they might enable power to be wielded with better effect. The physical capability, he thought, long preceded functional activity; and man's advance to civilisation was the result of the response of his nature to his conditions. He believed in the great value of contact and blending of varieties, and attributed the stationary condition of certain races partly to their early progress keeping them exclusive, and to the physical conditions which had walled them in. The climate of the temperate portions of the Eurasian Continent proved favourable to the development of the energies of mammals and men, and the configuration of the northern continent was especially favourable to migration. Thus there had nowhere been through any long period the still dulness of pure blood or the cramping domination of one power. The mingling of races in Britain, in a land of great natural advantages and resources, had led to the development of ability in the people to work out freedom, to invent, to adopt international conventions, and to free others. But he perceived dangers in the increased sensitiveness accompanying the great subdivision of labour nowadays. Of the two evils, learned feebleness was a greater evil than ignorant strength. The preservation of the weak and sick did not make the mass of people stronger and healthier; thus there must be sterner sanitary precautions as a foremost question. Would that some of the time spent on Burials Bills could have been spent in considering the crying needs of the health of the living. This misapplication of energy, said the Professor, had its parallel in the mistaken efforts to prevent the investigations by which physiology might be advanced and the laws of health educed. Few things would tend to the improvement of the race so much as judicious matrimonial selection, and he hinted at the importance of providing a healthy race for the future. Finally, as to man's body at least, and its future, he felt compelled to say that we found ourselves floating on the stream of time; the barque, we suppose, moves on. Sufficient for the day must be the knowledge thereof. Whether we peer fore or aft, it is obscurity.

SIR GEORGE JESSEL, the Master of the Rolls, has been elected Vice-Chancellor of London University, in place of Sir John Lubbock, who resigned on his becoming a candidate for the representation of the University in Parliament. The election is not likely to be contested.

SOCIETIES AND ACADEMIES

LONDON

Linnean Society, May 24. Anniversary Meeting.—Prof. Allman, F.R.S., president, in the chair.—At this, the ninety-second annual general meeting, there was a large attendance of the Fellows. The President, after a few introductory remarks of congratulation on the prospects of the Society generally, referred to the obituary, pointing out that several of the oldest members would now no longer appear on the list. Among others, Prof. T. Bell (*æt.* 87), J. Miers (*æt.* 91), Gen. Munro, Dr. David Moore, Wilson Sanders, E. W. Cooke, R.A., Fellows, and T. Atthey, Associate, besides Foreign Members of high standing, showed a heavy death-roll. The Secretaries and Treasurer, after full term of service, had proposed to resign, and as a matter of form this had been acceded to by the Council. The Secretary (Mr. F. Currey) then read his report. Since the last anniversary the Society had lost by death ten Fellows, three Foreign Members, and one Associate; and three Fellows had withdrawn. On the other hand, there had been an accession by election of twenty-eight new Fellows, three Foreign Members, and four Associates. The library showed a marked increase and improvement, by additions obtained by purchase, exchange, and donations, and had been amply used in biological reference and loan of books. The scientific communications and exhibitions at the meetings during the session had kept pace with the march of science, and the attendance of the Fellows bore witness to the active interest taken in the proceedings generally. —The Treasurer (Dr. J. Gwyn Jeffreys) then read his report. In resigning office he congratulated the Society on its increasing prosperity in a financial point of view. Notwithstanding the late depression of commerce, which had to a greater or less extent injuriously affected other scientific societies, as well as the additional yearly expenditure consequent on the removal to Burlington House, and the greater amount of salaries paid, the publications had not been restricted; considerably more having been spent on the library than formerly. The Society is quite free from debt; has an invested capital of £3730 12*s.* 8*d.*, and the balance at bankers and on hand at this date is £522 18*s.* 2*d.* Twelve months ago, owing to the unfortunate and long illness of the Librarian, his accounts became confused, and the Asst.-Secretary had since undertaken the receipts and payments, and had the books thoroughly balanced. A Special Committee had also been appointed by the Council for investigating the financial position of the Society, and their valuable suggestions had been adopted, especially as to the reasonable limitation of the publication expenses, which had increased from £796 14*s.* in 1876 to £1100 5*s.* 1*d.* in 1879. With respect to the compositions, which, even if they were altogether invested, must seriously diminish the income of the Society, the Treasurer stated that during his five years of office he had received £1968, and invested £920 15*s.* During the previous five years no part of the compositions appear to have been invested. He had also received and invested £840 for legacies. The Society's capital had been doubled; it was in 1875 £1860, and is now £3730 12*s.* 8*d.* The annual contributions received in 1876 amounted to £694 13*s.*, and last year to £948 12*s.* The ballot for Council and Officers having been proceeded with, the following gentlemen retired from the Council:—Messrs. J. Ball, W. Carruthers, F. DuCane Godman, Dr. A. Günther, and the Rev. G. Henslow. In their places were elected:—Messrs. E. R. Alston, G. Bentham, G. Busk, Dr. M. Foster, and B. D. Jackson. For the Officers, Prof. G. J. Allman was re-elected President; Mr. Fredk. Currey (the outgoing Secretary), Treasurer; Mr. B. Daydon Jackson, Botanical Secretary; and Mr. Edward R. Alston, Zoological Secretary.—Prof. Allman thereafter gave his usual annual address, taking for his subject "The Vegetation of the Riviera, a Chapter in the Physiognomy and Distribution of Plants." In this address (not well adapted for brief abstract), by a few broad outlines, a sketch of the most striking features of the vegetation and its peculiarities as derived from the physical contour of the country, geographical position, and climate, was given. The phenomena extant are of high interest